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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Alexander Josef

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EXAMINER

BROWN, COURTNEY A

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

09/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,985	Applicant(s) JOSEF, ALEXANDER	
	Examiner COURTNEY BROWN	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,2,4-6,8-10,12-19,21,23,24,26 and 40 is/are pending in the application.
- 4a) Of the above claim(s) 28-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/27/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt of Amendments/Remarks filed on May 19, 2008 is acknowledged. Claims 1,2,4-6,8-10,12-19,21,23,24,26, and 28-40 are pending. Claims 3,7,11,20,22,25,and 27 stand cancelled. Claims 1, 2, 4-6,8-10,12-19,21,23,24,and 26 were amended. Claim 40 was added. Claims 28-39 are withdrawn as being directed to a non-elected invention. Claims 1,2,4-6,8-10,12-19,21,23,24,26, and 40 are being examined for patentability.

Priority

Priority to Israel Foreign Application 150910 filed on July 25, 2002 is acknowledged.

Information Disclosure Statement

The Information Disclosure Statements (IDS) submitted on July 27, 2005 has been considered by the examiner.

Rejections and/or objections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1,2,4-6,8-10,12-19,21,23,24,26, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alyeshmerni (WO 00/76941 A1) in view of Dean et al., (US Patent 6,245,717 B1) and Gallant et al. (US Patent 5,102,440).

Applicant's Invention

Applicant claims a solid, granular, free-flowing, homogeneous (page 8, line 28, claim 1 of instant application) agrochemical composition (claims 1 and 27) containing:

- a. 15-35 weight % of a salt of phosphorous acid chosen from potassium, ammonium, and sodium salt (claims 1,3,15,16, and 23);
- b. 65-85 weight % of at least one other NPK (nitrogen and/or phosphorus and/or potassium) nutrient that is homogeneous, uniform in particle size, and water-soluble chosen from monoammonium or monopotassium phosphate (claims 1,2,14,16, and 24);
- and c. additives such as humic acid and surfactants (claims 8-10 and 12-13);
- and d. 0.1-0.4 weight % water (claims 20 and 21).

Applicant limits the composition of the instant application wherein the other NPK nutrient (component b above) comprises 0.05-0.5 weight percent of metal microelements (present as any commercially available salt) chosen from zinc, copper, iron, manganese, molybdenum and boron and present in the form of either chloride, sulfate, molybdate, EDTA, and boric acid (claims 1,4-7,22, and 25). Applicant further limits the composition of the instant application to have a pH of 3.8 to 5.3 when 1 part of the composition is dissolved in 100 parts of water (claims 19 and 26) and when mixed with water at ambient temperature in a ratio of 10 parts of solid to 90 parts of water or

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20 parts of solid to 80 parts of water, the said composition dissolves completely (claims 18 and 18).

***Determination of the scope and the content of the prior art
(MPEP 2141.01)***

Alyeshmerni teaches a solid or granular fertilizer formulation (page 9, lines 15-24, claims 1 and 27 of instant application) that comprises: a salt of phosphorous-containing acid (page 5, line 29-33 and page 12, reaction 2 for phosphite synthesis, line 5, claims 1 and 3 of instant application); other NPK nutrients such as monopotassium phosphite (page 7, lines 1--14, claims 1,2, and 14 of instant application); and microelement compounds such as copper, zinc, boron, magnesium, iron, calcium, sulfur, manganese, and molybdenum (page 15, lines 14-16 and Figure 3, claims 1 and 4-6 of instant application). Alyeshmerni also teaches a preferable pH of the formulation being 3.5-4.5 (page 13, lines 27-29) and how to achieve a desired pH for the formulation (page 19, lines 4-30, claims 19 and 26 of instant application).

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Alyeshmerni is that the instant invention requires that the NPK nutrient have a uniform particle size in the form of metal microelements (claim 6) and the use of additives and water. For this reason, Dean et al. is joined. Dean et al. teach a composition that may

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be in the form of a granule, diluted with water (column 4, lines 54-63) that may include one or more surfactants (column 4, lines 41-42, claims 8, 9, and 13 of instant application); humic acid (column 8, line 66, claims 8 and 13 of instant application); water (column 5, lines 8-31, claims 20 and 21 of instant application) ; micronutrients such as zinc, iron, copper, magnesium, boron, and molybdenum (column 6, lines 62-64 and claims 4 and 6 of instant application); and complexing agents (metal microelements of instant application) such as ferrous chloride (column 7, line 60-end to column 8, lines 1-24, claims 4 and 6 of instant application).

Another difference between the invention of the instant application and Alyeshmerni is that the instant application requires that the solid, granular, free-flowing, water-soluble composition is a solidified molten mixture. For this reason, the teaching of Gallant et al. is joined. Gallant et al. teach a carrierless granular slow release fertilizer composition that is formed from a molten urea-formaldehyde resin (column 5, lines 8-15). Gallant et al. teach the use of NPK particles (column 5, lines 15-20). Gallant et al. teach that using the aforementioned process produces granular products have been found to exhibit high physical integrity and hardness, to be of uniform granular size and to be homogeneous in chemical composition (column 5, lines 56-end to column 56, lines 1-3). Additionally, Gallant et al. teach heating the composition to 275 degrees Fahrenheit (135 degrees Celsius) (see example 3, column 8, lines 17-23).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to combine the teachings of Alyeshmerni, Dean et. al., and Gallant et al. One would be motivated to combine these teachings because complexing agents such as humic acid and the metal microelements serve as a carbon skeleton agent and to solubilize other components which may precipitate and become assailable or may immobilize minerals in the soil (Dean et al., column 7, lines 60-end and column 8, lines 1-24). Water and surfactants are used to facilitate the application of the composition to the plant (Dean et al., column 5, lines 13-25). Additionally, Gallant et al. teaches that the use of molten mixtures produces homogenous granular products. It would be prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in prior art." In re Kerkhoven 206 USPQ 1069, 1073. Thus, combining Alyeshmerni with Dean et. al. as claimed in the instant invention sets forth prima facie obvious subject matter. Alyeshmerni teaches a homogeneous formulation (page 8, lines 28-30) and according to Merriam-Webster's online dictionary, homogeneous means of uniform structure or composition throughout. Therefore, the limitation of claim 1 wherein the MPK nutrient is uniform in particle size is taught by Alyeshmerni. The examiner notes that Applicant claims a synergistic mixture of the

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additives and the metal microelements with the salts of phosphorous acid. The Examiner notes that the examples of the specification do not disclose data that shows the synergistic effects of the combination of the additives or the metal microelements with the salts of phosphorous acid. Therefore, the examiner cannot determine if the combination of the additives or the metal microelements would produce the purported synergism when combined with the salts of phosphorous acid. Therefore, the examiner notes that the claims are not commensurate in scope. In reference to the composition being completely dissolved when mixed with water at an ambient temperature in a ratio of 10 parts of solid to 90 parts of water or 20 parts of solid to 80 parts of water, those limitations are met when the formulation has a pH of 3.8-5.3. This pH range is taught by Alyeshmerni. Additionally, it is routine optimization for one of ordinary skill in the art to adjust the amount of ingredients to optimize the desired results. In this case the weight percent ranges of the salt of phosphorous acid, NPK nutrients, metal microelements, and water components are routine optimization.

Examiner's Response to Applicant's Remarks

Applicant's arguments filed on May 19, 2008 have been fully considered but they are not persuasive. Applicant argues that Alyeshmerni would not have led a person skilled in the art to a solid agrochemical composition which has underwent a molten stage, comprising homogenizing a complex molten mixture and cooling and breaking it. However, one of ordinary skill in the art at the time of the instant application would have known that in order to produce a free-flowing, uniform granule one must first combine

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the composition components to produce a molten mixture that is cooled and then broken into granules. This is evident in the teaching of Gallant et al. wherein a carrierless granular slow release fertilizer composition that exhibits high physical integrity and hardness, to be of uniform granular size and to be homogeneous in chemical composition (column 5, lines 56-end to column 56, lines 1-3) is formed from a molten urea-formaldehyde resin (column 5, lines 8-15). Therefore, the Examiner has established that the claimed solidified molten homogeneous mixture is prima facie obvious over Alyeshmerni in view of Dean et al. and Gallant et al.

Conclusion

None of the claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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